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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/744,678

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Tadayuki Suzuki

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3254

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07/28/2006

BIRCH STEWART KOLASCH & BIRCH

PO BOX 747

FALLS CHURCH, VA 22040-0747

EXAMINER

PRYOR, ALTON NATHANIEL

ART UNIT

PAPER NUMBER

1616

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/744,678

Applicant(s)

SUZUKI ET AL.

Examiner

Alton N. Pryor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1,7,8,13-20,27-34-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,7,8,13-20,27-34 and 37-44 is/are rejected.
- 7) ☐ Claim(s) 35,36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/13/06
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

I. Rejection of claims 1,15,17,19,20,27-29,32,33,34 under 35 USC 103(a) as being obvious over Sakai et al (JP 022029801; 08/21/90) will not be maintained in light of amendment filed 5/2/06. Sakai does not teach or suggest instant surfactant (A) wherein either a hydrophobic group is bound via an amide or ester linkage to the sugar. In addition, Sakai does not teach or suggest instant plant components or component C compounds.

II. Rejection of claims 1,7,8,14-16,18,19,27-29,21,34 under 35 USC 103(a) as being unpatentable over Nonomura et al (US 5958104; 9/28/99), JP 5111032; 9/29/76, and (JP 63033310; 2/13/98) will be maintained in light amend filed 5/2/06 for reason on record and reason as follows. New claims 37-44 are added to this rejection.

A) Applicant argues:

1) Nonomura discloses enhancement of plant growth and is directed to increasing the size of the plant; whereas, instant method claims are directed to keeping the freshness of a plant.

2) Nonomura describes its surfactant as an alkyl glycoside having 1-7 carbon atoms, but there is no disclosure regarding any ester / amide.

3) It is improper to combine Nonomura with JP '032 and / or JP '310. JP '032 merely shows enhancing plant growth using calcium cyanamide or cyanamide of formula (I) (aggregating agent – D). There is teaching in JP '032 regarding a surfactant as instantly claimed.

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4) JP '310 describes enhancement of plant growth (with active component chitin or chitosan) without any reference or description regarding a surfactant as instantly claimed.

B) Examiner argues:

5) Although instant method claims (keep plant fresh) have a different intended use from prior art cited (enhance plant growth), both inventions have the active step of applying a similar composition to the plant. Therefore, both inventions would yield a promotion of plant growth and freshness.

6) Applicant is correct in that the prior art does not teach or suggest a hydrophobic group being bound via an ester or amide linkage. However, instant claims (see claim 1) recite a hydrophobic group being combined via a glycoside linkage to the sugar.

7) It is proper (obvious) to combined Nonomura with JP '032 and / or JP '310 since all references cited have the same utility, i.e., the promotion of plant growth. One having ordinary skill in the art would have expected success from this union of references since each reference used individually teach promotion of plant growth. JP '032 does not need to disclose instant surfactant (A) since Nonomura is used to furnish the surfactant (A).

8) It is proper (obvious) to combined Nonomura with JP '032 and / or JP '310 since all references cited have the same utility, i.e., the promotion of plant growth. One having ordinary skill in the art would have expected success from this union of references since each reference used individually teach

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promotion of plant growth. JP '032 does not need to disclose instant surfactant (A) since Nonomura is used to furnish the surfactant (A).

Note applicant new claims recite an alkyl glycoside wherein the alkyl group has 8-18 carbon atoms. In the absence of unexpected result, Examiner finds the C8 alkyl glycoside obvious since Nonomura discloses C7 alkyl glycoside. C7 and C8 are homologs only differing in 1 – C atom. Homologs have similar size, polarity, physical properties and chemical properties and would therefore be expected to yield similar if the same activity.

III. Rejection of claims 7, 18 under 35 USC 103(a) as being obvious over Sakai et al (JP 022029801; 08/21/90) will be maintained in light of amendment filed 5/2/06 for reason on record and reason as follows.

Applicant argues that brassinolide in Sakai does not match component C in claims 7 and 18. More specifically Applicant states, “the present invention does not include a brassinosteroids (plant hormone) and /or Sakai '801 fail to disclose any alkylglycoside as instantly claimed. Examiner argues that claims 7 and 18 disclose plant hormones broadly therefore brassinosteroids (plant hormone class) are covered by claims as being plant hormones. See Applicants specification page 7 – 2nd full paragraph. Examiner argues that polyoxyethylene sorbitan fatty acid is a structure that is defined as having a hydrophobic group (polyoxyethylene) bound via a glycoside linkage to the sorbitan (sugar).

IV. New Rejection

Claim Rejections - 35 USC § 112

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1,7,8,13-20,27-34,37-44 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

For rejections under 35 U.S.C. 112, first paragraph, the following factors must be considered (In re Wands, 8 USPQ2d 1400, 1404 (CAFC, 1988)):

- 1) Nature of invention.
- 2) State of prior art.
- 3) Quantity of experimentation needed to make or use the invention based on the content of the disclosure
- 4) Level of predictability in the art.
- 5) Amount of direction and guidance provided by the inventor.
- 6) Existence of working examples.
- 7) Breadth of claims.
- 8) Level of ordinary skill in the art.

See below:

1) Nature of the invention.

The nature of the invention is to compositions and methods of keeping plants refresh using a mixture of instant sugar or sugar alcohol surfactant (A) in combination with at least one compound selected from a sugar, plant hormone, an aging inhibitor,

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aggregating agent, and a germicide, fungicide, and preservative. Applicant's specification defines plants as harvested as well as non-harvested. Since Applicant provides sufficient guidance for keeping harvested plants fresh, this 112 rejection is directed toward non-harvested plants.

2) State of the prior art and the predictability or lack thereof in the art.

The state of the prior art is that it involves screening *in vitro* and *in vivo* to determine which surfactant A exhibited the desired activities (i.e. which surfactant A compounds can keep plant fresh). There is no absolute predictability even in view of the seemingly high level of skill in the art. The existence of these obstacles establishes that the contemporary knowledge in the art would prevent one of ordinary skill in the art from accepting any regimen on its face. The instant claimed invention is highly unpredictable as discussed below:

It is noted that the plant art is unpredictable, requiring each embodiment to be individually assessed for physiological activity. *In re Fisher*, 427 F.2d 833, 166 USPQ 18 (CCPA 1970) indicates that the more unpredictable an area is, the more specific enablement is necessary in order to satisfy the statute. Further, their mode of action is often unknown or very unpredictable and administration of the surfactants can be accompanied by undesirable side effects.

Thus, in the absence of a showing of correlation between the non-harvested plant freshness and the surfactant A compounds, one of ordinary skill in the art is unable to fully predict possible results from the administration of the surfactants due to the unpredictability of the role of the huge number of non-harvested plants set forth in the claims.

3) Quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The quantity of experimentation needed is undue experimentation. One of ordinary skill in the art would first need to determine surfactant A compounds, and then determine which surfactants would be effective in keeping non-harvested plants fresh.

5) Amount of direction and guidance provided by the inventor.

The amount of direction or guidance present is found on pages 14-42, wherein data is only provided for keeping harvested plants fresh. Applicant provides not data for keeping non-harvested plants fresh.

6) Existence of working examples.

Working examples are found on pages 14-42, wherein data is only provided for keeping harvested plants fresh. Applicant provides not data for keeping non-harvested plants fresh.

7) Breadth of claims.

Claims are extremely broad due to the lack of guidance in the specification for non-harvested plants encompassed by the instant invention.

8) Level of ordinary skill in the art.

The level of ordinary skill in the art is high. Due to the unpredictability in the plant art, it is noted that each embodiment of the invention is required to be individually assessed for physiological activity by *in vitro* and *in vivo* screening to determine which compounds exhibit the desired physiological activity and which non-harvested plants would benefit from this activity.

Hence, the specification fails to provide sufficient support of the use of the compounds of the claims for keeping non-harvested plant fresh. As a result necessitating one of ordinary skill in the art to perform an exhaustive search to determine which non-harvested plants can be kept fresh with the surfactant A compounds.

Genentec Inc. V. Novo Nordisk A/S (CAFC) 42 USPQ 2D 1001, states that:

“a patent is not a hunting license. It is not a reward for search, but compensation for its successful conclusion” and “[p]atent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable”.

Therefore, in view of the Wands factors, and *In re Fisher* (CCPA 1970) discussed above, to practice the claimed invention herein, a person of ordinary skill in the art would have to engage in undue experimentation to test which non-harvested plants can be kept fresh using instant surfactant A, with no assurance of success.

Claim Objection

Claims 35 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant provides unexpected data for harvested plants. See pages 14-42 of instant specification.

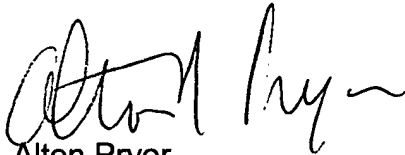
Telephonic Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alton N. Pryor whose telephone number is 571-272-0621. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Alton Pryor', with a stylized flourish at the end.

Alton Pryor
Primary Examiner
AU 1616